GREE
Change for life

Air-to-water Heat Pump Wired Controller

Versati II

Owner's Manual

Commercial Air Conditioners

INVERTER

Thank you for choosing Commercial Air Conditioners, please read this owner’s manual carefully before operation and retain it for future reference.

Notices

Do not install the control where it is damp or exposed to direct sunlight.

Once the air conditioning unit is installed where possibly subject to electromagnetic interference, shielded twisted pairs should be used as signal lines and other communication lines.

Be sure communication lines are wired to the correct ports, or normal communication would fail.

Do not beat, toss or frequently assemble and disassemble this control.

Do not operate the control with wet hands!

Figures in this Manual are just for reference!

We the manufacturers keep the right to modify this Manual owing to sales or other production reasons without previous notice.

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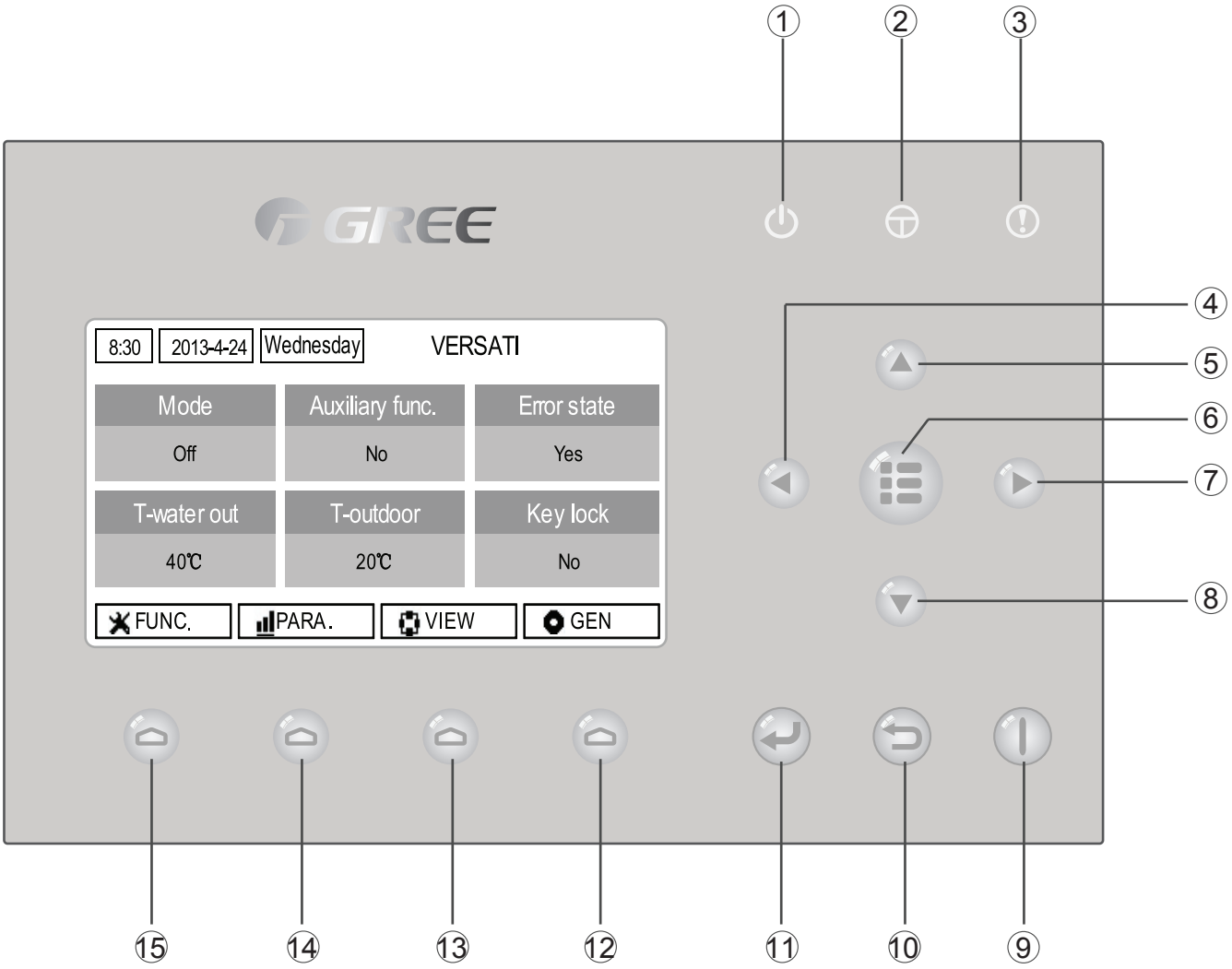
1. External View

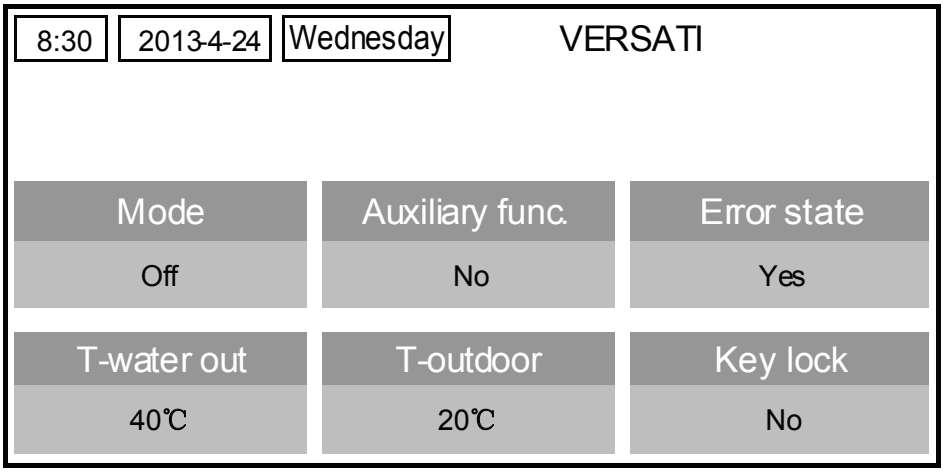


(This effect drawing is just for reference)

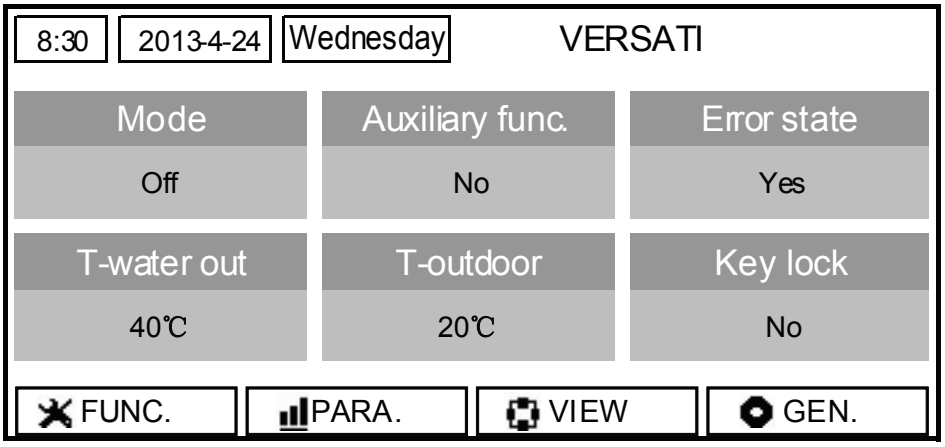
No.	Symbol	Description	No.	Symbol	Description
①		Running indicating LED	⑨		ON/OFFF
②		Power indicating LED	⑩		Cancel/Return key
③		Error indicating LED	⑪		OK key
④		Left key	⑫		Function key no. 4
⑤		Up key	⑬		Function key no. 3
⑥		Menu key	⑭		Function key no. 2
⑦		Right key	⑮		Function key no. 1
⑧		Down key			

1.1 Standby Page and Homepage

Standby Page



Home Page



No.	Item	Functional Description
1	Mode	It is intended to access to the actual running mode.
2	Auxiliary Func.	It indicates the auxiliary function note 1.
3	Error state	It indicates if there is any error.
4	T-water out	It indicates the actual leaving water temperature.
5	T-outdoor	It indicates the actual outdoor environment temperature.
6	Key lock	It indicates if the key lock is activated or deactivated.

Note:

it includes the "**Sanitize mode**", "**Quiet**" mode, "**Auto**" mode, "**Floor debug**" mode, "**Emergen. mode**", "**Holiday mode**", "**Forced Heating**" mode, and "**Debug**" mode.

1.2 Keys

No.	Item	Functional Description
1	ON/OFF key	It is intended to turn on or off the unit.
2	OK key	It is intended to save the setting or go to the submenu.
3	Cancel/Return key	It is intended to go to the higher level menu.
4	Menu key	It is intended to call out the main menu or back to the homepage.
5	Left/Right key	It is intended to move the cursor Left/Right.
6	Up/Down key	It is intended to modify the setting state or value of the selected parameter.
7	Function keys (4)	It is intended to perform different functions at difference pages.

1.3 Indicating LEDs

No.	Item	Functional Description
1	On/Off indicating LED (green)	It will light on/off when the unit is turned on/off.
2	Power indicating LED (yellow)	It will light on/off when the unit is powered on/off.
3	Fault indicating LED (red)	It will light on when some fault occurs.

2. Operation Instructions

2.1 On/Off

★ At the homepage, by pressing the ON/OFF key, the unit will be turned on/off.

★ When the unit is ON, the green indicating LED located at the upper right of the control will light on. When the unit is OFF, the green indicating LED will light off.

[Notes]

●The unit is defaulted to be OFF when energized for the first time.

●The ON/OFF key operation works only at the home page and the standby page.

●When the "**Holiday mode**" or the "**Emergen.mode**" is activated, the ON/OFF key operation will become ineffective.

●When the "**Forced Heating**" is activated, it will be deactivated by pressing the "ON/OFF" key, and then press the ON/OFF key again to start the unit.

● ON/OFF operation will be memorized by setting "**Memory**" to be "**On**" at the "**GEN**." setting page. That is, in case of power failure the unit will resume running upon power recovery. Once "**Memory**" is set to be "**Off**", in case of power failure the unit will keep "**Off**" upon power recovery.

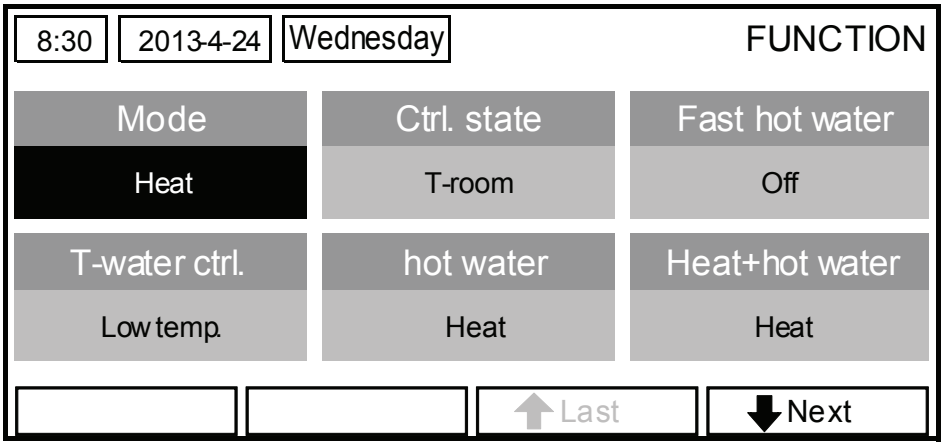
●At the home page, the ON/OFF key is intended to turn on/off the unit if applicable. The Function keys no.1 to no.4 are corresponding to "**FUNC.**", "**PAPA**", "**VIEW**" and "**GEN.**" setting pages respectively.

●At the standby page, the Menu key is used to back to the homepage, the ON/OFF key is used to turn on/off the unit if applicable, and all other key operations are ineffective.

●The control will return automatically to the homepage where there is no any key operation in 10 consecutive minutes.

2.2 Function Setting

★1. At the homepage, by pressing the Function key no. 1, the control will access to the **FUNCTION** page 1, as shown in the figure below.



FUNCTION page 1

★2. At the **FUNCTION** page, by the Right/Left key, the desired function option can be selected, and by the Up/Down key, the setting of the current function option can be modified. The function key no. 3 or no. 4 can be used for switch pages. After the setting is finished, by pressing the Menu

key, the control will back to the homepage, or by pressing the Return key the control will back to the higher level menu.

[Notes]

Move the cursor to the desired option and “Enter” will be displayed at the lower left side of the LCD, reminding you that you are allowed to access to the submenu by pressing the OK key.

At the **FUNCTION** page, when the setting of some function option is changed and needs to be memorized, then in case of power failure it will be saved automatically and resume upon power recovery.

Function Settings

No.	Full Name	Displayed Name	Range	Default	Remarks
1	Running mode setting	Mode	/Heat/Hot water/Heat+Hot water	Heat	When the water tank is unavailable, then only “Heat” is included in the range.
2	Control state	Ctrl. state	T-water out / T-room	T-water out	“T-Room” is available only when “Remote Sensor” is set to “With”.
3	Fast hot water	Fast hot water	On/Off	Off	When the water tank is unavailable, this function will be reserved, and the LCD will display ‘Reserved’.
4	Water out temperature control	T-water ctrl.	High temp. /Low temp.	Low temp.	/
6	Heat+hot water	Heat+hot water	Heat/Hot water	Heat	When the water tank is unavailable, this function will be reserved, and the LCD will display ‘Reserved’.
7	Quiet mode	Quiet mode	On/Off	Off	/
8	Quiet timer	Quiet timer	On/Off	Off	/
9	Auto mode	Auto mode	On/Off	Off	/
10	Holidayrelease	Holidayrelease	On/Off	Off	/
11	Sanitize	Sanitize	On/Off	Off	When the water tank is unavailable, this function will be reserved, and the LCD will display ‘Reserved’.
12	Weekly timer	Weekly timer	On/Off	Off	/
13	Clock timer	Clock timer	On/Off	Off	/
14	Temperature timer	Temp. timer	On/Off	Off	/
15	Floor debug	Floor debug	On/Off	Off	/
16	Emergency mode	Emergen. mode	On/Off	Off	/
17	Holiday mode	Holiday mode	On/Off	Off	/
18	Thermostat	Thermostat	With/Without	Without	/
19	IDU heater	IDU heater	1/2/Off	1	/
20	Other heater	Other heater	With/Without	Without	/
21	Chassis heater	Chassis heater	On/Off	On/	/
22	Water tank	Water tank	With/Without	Without	/
23	Tank sensor	Tank sensor	1/2	2	When the water tank is unavailable, this function will be reserved,and the LCD will display ‘Reserved’ .

24	Solar heater	Solar heater	With/Without	Without	/
25	FCU	FCU	With/Without	Without	/
26	Remote sensor	Remote sensor	With/Without	Without	When it is set to “Without”, the “Control state” will be automatically changed to “T-water out”.
27	Air removal	Air removal	On/Off	Off	/
28	Address	Address	[0~12] [127~253]	0	/
29	Doorguard	Doorguard	On/Off	Off	/

2.2.1 Mode

★ At the equipment OFF state, access to the **FUNCTION** page and then move through the Left/Right key the cursor to the “**Mode**” whose characters will be reversed, then press the Up/Down key to modify its setting.

[Notes]

●The “**Heat**” mode is defaulted when the unit is energized for the first time.

●The running mode is allowed to be changed only when the unit is not in operation. If it is done with the unit being on, a window will pop up, warning “please turn off the system first”.

●When the water tank is disabled, only the ‘**Heat**” mode is allowed.

●When the water tank is enabled, “**Heat**”, “**Hot water**”,“**Heat+hot water**” is allowed.

●This setting can be memorized upon power failure.

2.2.2 Control State (Ctrl. state)

★ Go to the **FUNCTION** page and locate **Ctrl. state**, then, configure it through the Up/Down key.

[Notes]

●If “**Remote sensor**” is set to “**With**”, “**T-out water**” and “**T-room**” are available. While if “**Remote Sensor**” is set to “**Without**”, only “**T-out water**” is selectable.

●This setting will be memorized upon power failure.

2.2.3 Fast Hot Water

★ Go to the **FUNCTION** page and locate “**Fast hot water**”, then, configure it through the Up/Down key, “**On**” or “**Off**”.

[Notes]

●It works only when “**Water tank**” is set to “**With**”.

●This setting will be memorized upon power failure.

2.2.4 T-water Ctrl (Water Temperature Control for Heating)

★ Go to the **FUNCTION** page and locate “**T-water ctrl.**”, then, configure it through the Up/Down key, “**High temp.**” or “**Low temp.**”.

[Notes]

●When this setting is changed, the following parameters will return to the default values.

Water out temperature for heating	WOT-Heat	45℃/113℉[High] 35℃/95℉[Low]
Upper limit water-out temperature at the auto mode for heating	Upper WT-Heat	48℃/118℉[High] 35℃/95℉[Low]
Lower limit water-out temperature at the auto mode for heating	Lower WT-Heat	40℃/104℉[High] 29℃/84℉[Low]

●This setting will be memorized upon power failure.

2.2.6 Heat + Hot water

★ Go to the **FUNCTION** page and locate **Heat+hot water**, then, configure it through the Up/Down key, "**Heat**" or "**Hot water**".

[Notes]

●"**Hot water**" will take precedence only when "**Water tank**" is available, other it will tell "**Reserved**".

●This setting will be memorized upon power failure.

2.2.7 Quiet Mode

★ Go to the **FUNCTION** page and locate "**Quiet mode**", then, configure it through the Up/Down key, "**On**" or "**Off**".

[Notes]

●It can be set to "**On**" or "**Off**" no matter if the unit is in operation or not.

●Once it is activated, it should be deactivated manually or by **Quiet Timer**.

●It will not memorized and defaulted to be off upon power failure.

●It will be deactivated when the unit is turned off.

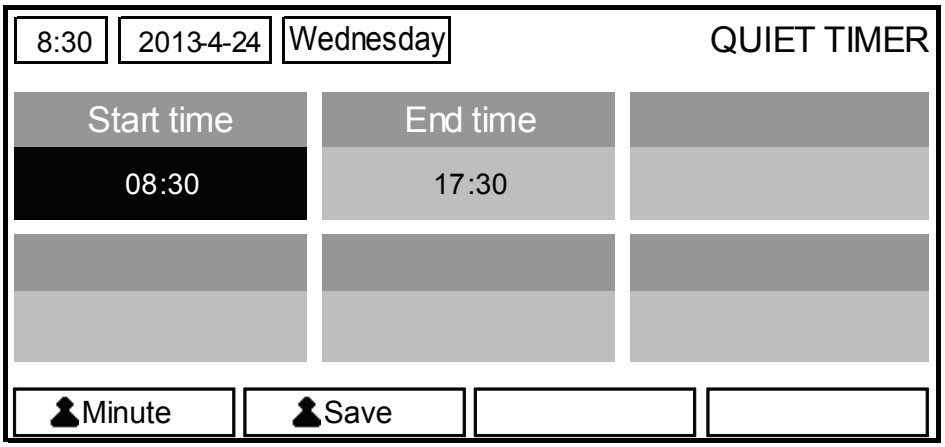
2.2.8 Quiet Timer

★1 Go to the **FUNCTION** page and locate **Quiet timer**, then, access to the **QUIET TIMER** setting page.

★2 At the **QUIET TIMER** setting page, select "**Start time**" or "**End time**" through the Left/Right keys and then configure the desired time through the Up/Down keys.

★3 When the mode setting is finished, then by pressing "Save", a pop-up window will pop up to remind if you are determined to save this setting. If so, press the "OK" key. If not, press the "Cancel" key to not save this setting.

★4. When the setting is saved, the control then will back to the **FUNCTION** page and the cursor will be where the "**Quiet timer**" option is, then by the Up/Down key, it can be set to be "**On**" or "**Off**".



[Notes]

●Once it is activated, it should be deactivated manually.

●It will not be memorized and be defaulted to be off upon power failure.

●The saved "**Start time**" and "**End time**" will be memorized upon power failure.

●It is configurable no matter if the unit is in operation or not.

2.2.9 Auto Mode

★ Go to the **FUNCTION** page and locate **Auto mode**, then, configure it through the Up/Down key, "**On**" or "**Off**".

[Notes]

●Once it is activated, it should be deactivated manually.

●It will be defaulted to be off upon power failure.

●At the "**Parameter View**" page, it is able to check the set point at the Auto mode.

●When it is activated, it is allowed to set the room temperature but the set point does not take effective. However, when it is deactivated, the unit will run according to this set point.

●It can be set to "**On**" or "**Off**" no matter if the unit is in operation or not, but be activated only when the unit is in operation.

● This mode works only for the air conditioning function.

2.2.10 Holiday Release

★ Go to the **FUNCTION** page and locate "**Holiday release**", then, configure it through the Up/Down key, "**On**" or "**Off**".

[Notes]

●When it is activated, at the **WEEKLY TIMER** page, it is able to set some week day to "**Holiday release**". In this case, the "**Weekly timer**" in this day is ineffective unless it is set to "**Effective**" manually.

●This setting will be memorized upon power failure.

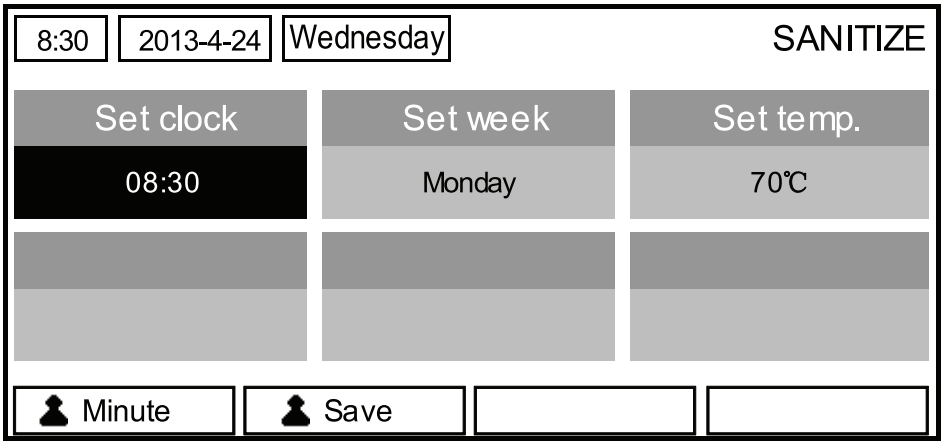
2.2.11 Sanitize

★1 At the **FUNCTION** page, locate "**Sanitize**", and then access to the **SANITIZE** setting page by pressing the OK key.

★2 At the **SANITIZE** setting page, select "**Set clock**", "**Set week**" or "**Set temp**" through the Left/Right key and then modify the corresponding setting through the Up/Down key.

★3 When the mode setting is finished, then by pressing "**Save**", a pop-up window will pop up to remind if you are determined to save this setting. If so, press the OK key. If not, press the Cancel key to not save this setting.

★4 When the setting is saved, the control then will back to the **FUNCTION** page and the cursor will be where the "**Sanitize timer**" is, then by the Up/Down key, it can be set to "**On**" or "**Off**".



[Notes]

●It can be activated only when the "**Water tank**" is set to "**With**".

●It can be set to "**On**" or "**Off**" no matter if the unit is in operation or not

●When "**Sanitize**" is set to "On", if you intend to set the "**Emergen. mode**", "**Holiday mode**", "**Floor Debug**", then a window will pop up, warning "**Please disable the Sanitize Mode!**".

●It can be set to "**On**" or "**Off**" no matter if the unit is in operation or not, and "**Hot water**" mode always takes precedence.

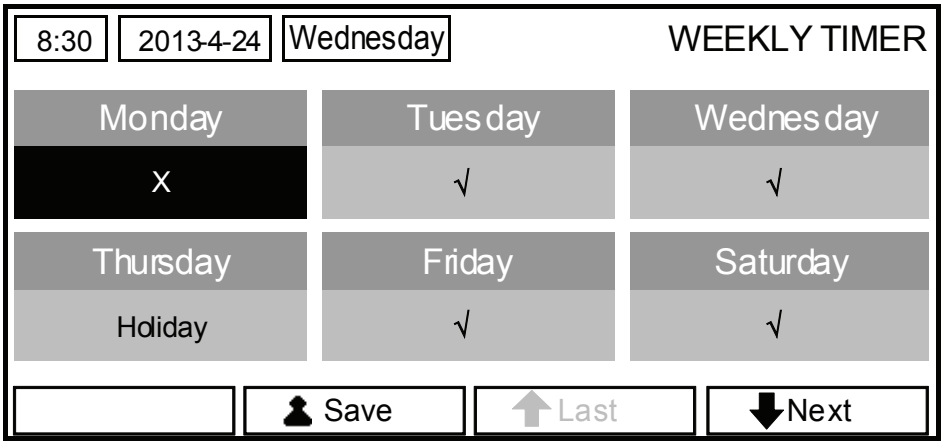
●When Sanitize is activated, "**Sanitize**" will show on the home page of the control until this operation is finished. If this operation fails, "**Sanitize fails**" will show. In this case, by pressing any key, "**Sanitize failure**" will be cleared or it will be always there.

●When Sanitize is activated, it will quit upon "**Communication error with the indoor unit**" or "**Water tank heater error**".

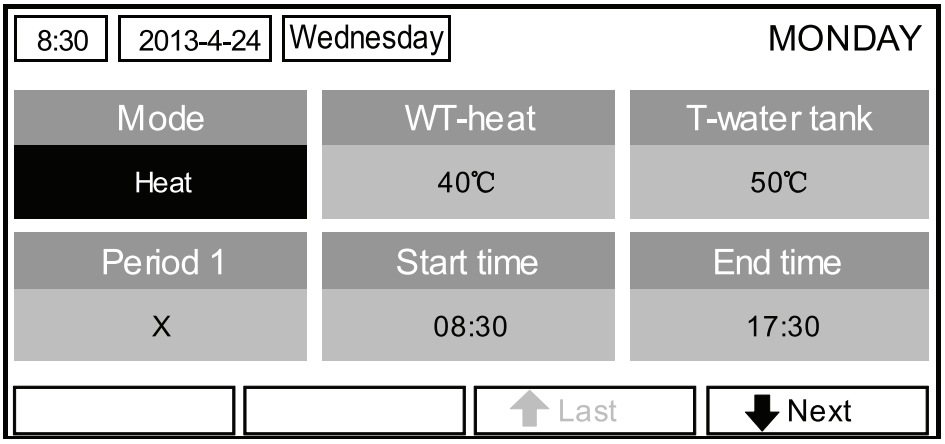
2.2.12 Weekly Timer

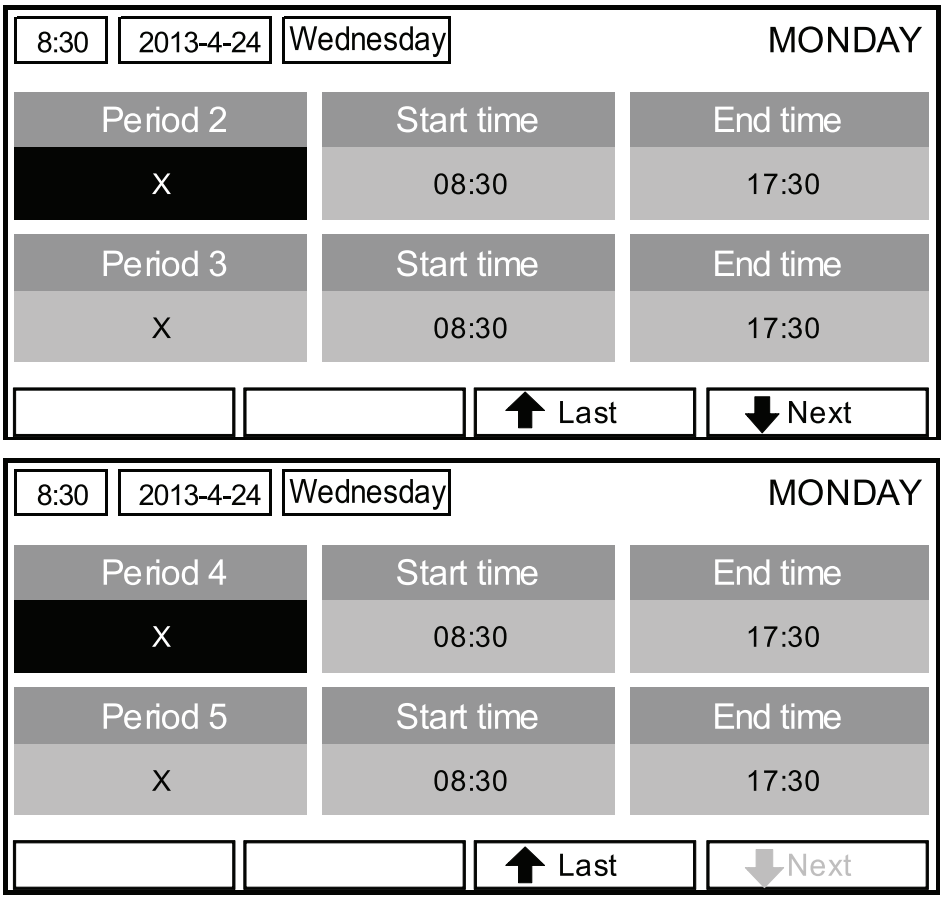
★1 At the homepage, by pressing the Function key access to the **FUNCTION** page, and then locate where "**Weekly timer**" is by switching pages, after that, press OK key to go to the **WEEKLY TIMER** setting page.

★2 At the **WEEKLY TIMER** setting page, by the Right/Left key it is able to select the desired week day and then by the Up/Down key to set this day, "√", "×" or "Holiday", as shown in the figure below. When this setting is finished, press OK key to go to this day's setting page.



★3 At the week day's setting page, it is allowed to set the running mode (Mode), temperature set point (WT-HEAT), and water tank temperature (T-Water Tank). The running mode includes "**Heat**", "**Hot water**", "**Heat+ hot water**" (the last three ones are available only when "Water tank" is set to "With". There are totally five periods for each day, and each period can be set to "√"or "×". Besides, it is able to set the "**Start time**" and "**End time**" for each period, as shown in the figure below.





★4 When above settings are finished, pressing the Return key and then pressing "**Save**", a pop-up window will pop up to remind if you are determined to save these settings. If so, press the OK key. If not, press the Return key to not save these settings.

★5 In this case, finally by pressing the Up key, "**Weekly timer**" will be activated.

[Notes]

●Totally five periods are allowed to be set for each time. For each period, "**Start time**" must be earlier than "**End time**". Similarly, the preceding period must be earlier than its following period.

●When "**Weekly timer**" has been set successfully, by changing "**FCU**", "**Water tank**", "**Ctrl state**", or "**T-water ctrl**", then the temperature set point for "**Weekly timer**" will be automatically changed to the set point of last setting. For instance, if "**Heat**" is set for Monday of "**Weekly timer**", "**FCU**" is set to "**With**" and the "**T-water out**" is 20℃, by resetting "**FCU**" to "**Without**", then "**T-water out**" will be the value of last setting. In this case, if FCU is disabled for last setting, then "**T-water out**" will be the default value (18℃).

●At the "**WEEKLY TIMER**" setting page there are totally three setting types for each day

"√": it indicates once the Week Timer is activated, the timer on this day is effective and will not be affected by the "**Holiday**" mode.

"×": it indicates even if the Week Timer is activated, the timer on this day is ineffective.

"**Holiday**": it indicates when the Week Timer is activated but "**Holiday**" is not activated, then the timer on this day is effective; when "Holiday" is also activated, the timer on this day is ineffective.

●When "**Weekly timer**" has already been set and the concerned modes include "**Hot water**", if resetting "**Water tank**" from "**With**" to "**Without**", then "**Hot water**" mode will be automatically changed to "**Heat**", "**Heat+hot water**" changed to "**Heat**".

●Temperature Setpoint

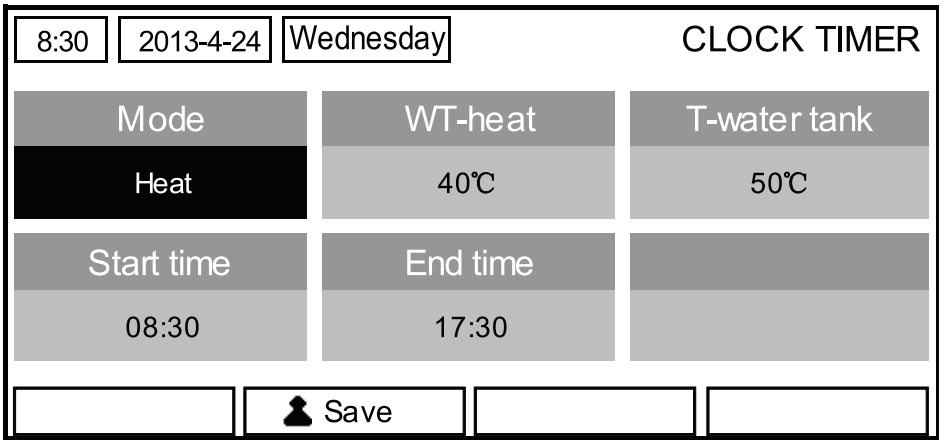
The control is able to decide the temperature type and temperature range based on the current "**Clock Timer**", "**FCU**", "**T-water Ctrl.**", and "**Ctrl. state**" settings. See the followings for more details.

If the set mode is "**Hot water**", the temperature set point shows nothing, indicating there is no need to set "**T-water out**" and "**T-room**" but only "**T- tank**". If the set mode "**Heat**", then water tank temperature box will show nothing, indicating there is no need to set "**T-tank**".

Ctrl. state	Set Mode	Object	Range		Default	Accuracy
T-water out	Heat	Water out temperature for heating(WT-heat)	High temp.	25-55℃	45℃	1℃
			Low temp.	25-45℃	35℃	1℃
T-room	Heat	Room temperature for heating(RT-heat)	18-30℃		26℃	1℃

2.2.13 Clock Timer

★1 At the homepage, by pressing the Function no.1 key access to the **FUNCTION** page, and then locate where "**Clock timer**" is, after that, press OK key to go to the **COLCK TIMER** setting page.



★2 At the **CLOCK TIMER** setting page, by the Left/Right key select the desired parameter and then by the Up/Down key configure it.

★3 When this setting is concerned about time value, by pressing the Function key no. 1 alternately set the hour or minute values, and by pressing the Up/Down key increase or decrease the corresponding value which will be continuously changed by pressing and holding the key.

(Unless otherwise specified, all timer settings follow the similar way.)

★4When the setting is finished, save it by pressing the Function key no. 2, or this setting without being saved is ineffective.

★5 When the setting has been saved, activate the "**Clock Timer**" at the **FUNCTION** page.

[Notes]

●When "**Weekly timer**" and "**Clock timer**" settings are performed at the same time, the latter takes precedence.

●When the water tank is available, the allowed running modes include "**Heat**", "**Heat+**

hot water", and "**Hot water**".

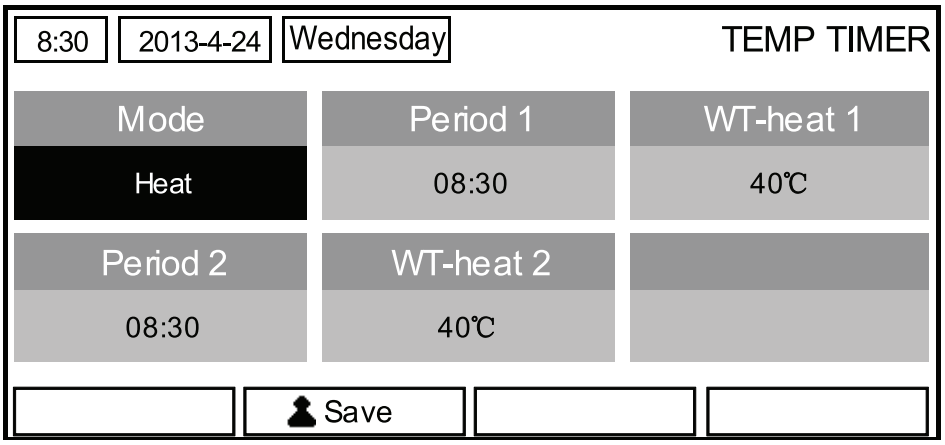
When the water tank is unavailable, the allowed running modes only include "**Heat**" .

●When "**Clock timer**" has already been set and the concerned modes include "**Hot water**", if resetting "**Water tank**" from "**With**" to "**Without**", then "**Hot water**" mode will be automatically changed to "**Heat**", "**Heat+hot water**" changed to "**Heat**".

Full Name	Displayed Name	Range	Default
Set Mode	Mode	Heat/ Hot water/Heat +hot water	Heat
Wateroutlettemperaturefor heating / Room temperature for heating	WT-heat/ RT-heat/	Refer to the temperature setting range of "Weekly Timer".	35℃
Tank temperature	T-water tank	40~80℃/104~176℉	50℃/122℉
Start time	Start time	00:00-23:59	08:30
End time	End time	00:00-23:59	17:30

2.2.14 Temp. Timer

★1 At the homepage, by pressing the Function key access to the **FUNCTION** page, and then locate where "**Temp timer**" is, after that, press OK key to go to the **TEMP TIMER** setting page.



★2 At the **TEMP TIMER** setting page, by the Left/Right key select the desired parameter and then by the Up/Down key configure it. The configurable parameters include "**Mode**", "**Period 1**", "**WT-HEAT 1**", "**Period 2**" and "**WT-HEAT 2**".

★4 When the setting is finished, save it by pressing the Function key no. 2, or this setting without being saved is ineffective.

★5 When the setting has been saved, activate the "**Temp. timer**" at the **FUNCTION** page.

[Notes]

● When "**Weekly timer**", "**Clock timer**", and "**Temp. timer**" settings are performed at the same time, the last one takes precedence.

● This function works only when the unit is in operation.

● The allowed running mode include "**Heat**"

● When the start time of "**Period 2**" is equal to that of "**Period 1**", then the set point of "**Period 2**" takes precedence.

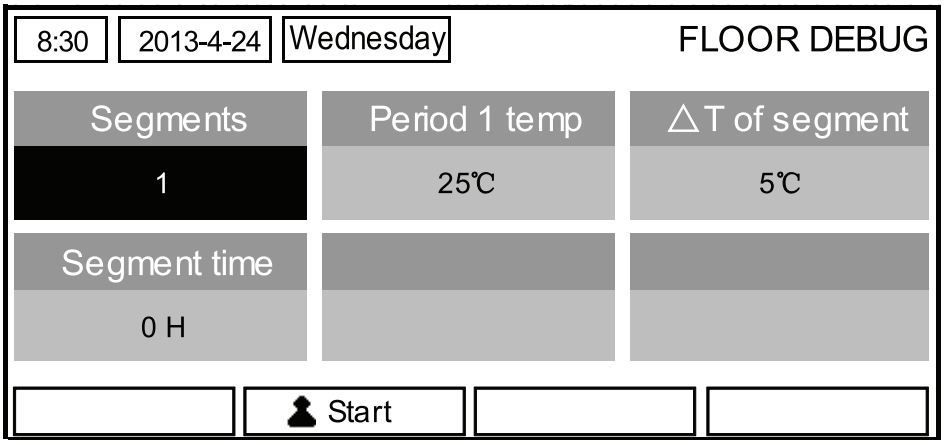
● **TEMP. TIMER** is judged by the timer value.

● During the setting, the temperature set point which is set manually always takes precedence.

Full Name	Displayed Name	Range	Default
Set Mode	Mode	Heat	Heat
Period 1 running time	Period 1	00:00-23:59	08:30
Waterouttemperaturefor heating / Room temperature for heating	WT-heat 1/ RT-heat 1/	Refer to the temperature setting range of “Weekly Timer”.	35℃/95℉
Period 1 running time	Period 2	00:00-23:59	17:30
Waterouttemperaturefor heating / Room temperature for heating	WT-heat 2/ RT-heat 2/	Refer to the temperature setting range of “Weekly Timer”.	35℃/95℉

2.2.15 Floor Debug

★1 At the homepage, by pressing the Function key access to the **FUNCTION** page, and then locate where “**Floor debug**” is, after that, press OK key to go to the **FLOOR DEBUG** setting page.



★2 At the **FLOOR DEBUG** setting page, by the Left/Right key select the desired parameter and then by the Up/Down key configure it. The configurable parameters include “**Segments**”, “**Period 1 temp**”, “**ΔT of segment**”, and “**Segment time**”, as listed in the following table..

No.	Full Name	Displayed Name	Range	Default	Accuracy
1	Segments for floor debug	Segments	1~10	1	1
2	First temperature for floor debug	Period 1 temp	25~35℃/ 77~95℉	25℃/77℉	1℃/1℉
3	Segment temperature difference for floor debug	ΔT of segment	0~72H	0	12H
4	Segments duration for floor debug	Segment time	2~10℃/ 36~50℉	5℃/41℉	1℃/1℉

★3 After the above setting is finished, by pressing the function key no. 2 activate this function and a dialog box will pop up, reminding “**Start the Floor Debug Mode now?**”. If so, press the “OK” key. Once “**Floor debug**” has been activated, by pressing the function key no. 2, a dialog box also will pop up, reminding “**Stop the Floor Debug Mode now?**” If so, press the OK key; if not, press “**Cancel**” to go on.

[Notes]

● This function can be activated only when the unit is OFF. When it is intended to activate this

function with the unit being ON, a dialog box will pop up, warning "**Please turn off the system first!**".

● When this function has been activated, it is unable to turn on or off the unit. In this case, when pressing the ON/OFF key, a dialog will pop up, warning "**Please disable the Floor Debug Mode!**".

● When this function has been set successfully, "**Timer week**", "**Clock timer**" and "**Temp timer**" will be deactivated.

● "When "**Floor debug**" mode has been activated, "**Emergen.mode**", "**Sanitize**", "**Holiday mode**" is not allowed to be activated, or a dialog box will pop up, warning "**Please disable the Floor Debug Mode!**".

● Upon power failure, this function will be OFF and runtime will be cleared.

● At the **FlOOR DEBUG** setting page, the control will remain at this page and never back to the homepage unless pressing the Return key or Menu key.

● When this function is activated, it is allowed to check the target temperature and runtime of "Floor Debug" at the Parameter View page.

● Before activating "**Floor debug**", please make sure each period for "**Floor debug**" is not zero, or a dialog box will pop up, warning "**Wrong Floor Debug time!**". It will resume only by pressing "OK" and then correcting the time.

2.2.16 Emergency Mode (Emergen. Mode)

★1 Set "**Mode**" to "**Heat**" or "**Hot water**" at the Parameter Set page

★2 Then, switch pages to go the page where "**Emergen. mode**", locate it by the Left/Right key, and configure it to "**On**" or "**Off**" by the Up/Down key.

★3 When it is set to "**On**", "**Auxiliary func.**" at the homepage will be replaced by "**Emergen. Mode**".

★4 When it is set to "**On**" but the running mode is not "**Heat**" or "**Hot water**", a dialog will pop up, warning "**Wrong running mode!**". In this case, by pressing the OK key, the control will go to the Mode setting page, or by pressing the Cancel key, the control will return to the "**Emergen. Mode**" page.

[Notes]

●When the unit is performing "**Heat**" at the Emergency mode, if there is water flow switch protection, IDU assistant heater welding protection, or leaving water temperature sensor error, the Emergency mode will quit and will not be allowed to be activated.

●When the unit is performing "**Hot water**" at the Emergency mode, if there is water tank heater welding protection, or water tank temperature sensor error, the Emergency mode will quit and will not be allowed to be activated.

●At the Emergency mode, the ON/OFF key operation will be disabled; the running mode will not be allowed to be changed; the Quiet and Auto modes cannot be deactivated; "**Weekly timer**", "**Clock timer**" and "**Temp timer**" also cannot be activated, or will be deactivated if being activated.

● At the Emergency mode, commands from the Thermostat is ineffective.

● At the Emergency mode, only one running mode between "**Heat**" and "**Hot water**" is allowed.

●This function can be activated only when the unit is OFF, or a dialog box will pop up, warning "**Please turn off the system first!**"

●Under the Emergency mode, "**Floor debug**", "**Sanitize**", "**Holiday mode**", cannot be activated, or a dialog box will pop up, warning " **Please disable the Emergency Mode!**".

●Upon power failure, the "**Emergen. mode**" will be defaulted to be "**Off**".

2.2.17 Holiday Mode

★1 Locate where "**Holiday mode**" at the **FUNCTION** page

★2 Set Holiday to "**On**" or "**Off**" by the Up/Down key.

[Notes]

●At the holiday mode, "**Mode**" setting of the control and On/Off key operation both are disabled.

●When it is activated, "**Weekly timer**", "**Clock timer**" or "**Temp timer**" will be deactivated.

●At the holiday mode, when "**T-Room**" is adopted, the temperature set point should be 15℃; when "**T-Out water**" is adopted, then the temperature set point should be 30℃.

● When this setting is saved successfully, it will be memorized upon power failure.

●This function can be activated only at the "**Heat**" mode and with the unit turned off. When it is done with the unit turned on, a prompt dialog box will pop up, warning "**Please turn off the system first!**"; or when it is done at other modes except the "**Heat**" Mode with the unit turned off, also a prompt dialog box will pop up, warning "**Wrong running mode!**".

●When it is activated, the ON/OFF key operation is disabled, or a dialog box will pop up, warning "**Please disable the Holiday Mode !**".

●Under the Holiday mode, "**Floor debug**", "**Sanitize**", "**Emergen. mode**" cannot be activated, or a dialog box will pop up, warning "**Please disable the Holiday Mode !**".

2.2.18 Thermostat

★1 Locate where "**Thermostat**" is at the **FUNCTION** page

★2 By pressing the Up/Down key, Thermostat can be set to "**On**" or "**Off**". When it is "**On**", the control follows the running mode of the thermostat and is not allowed to set the running mode; when it is "**Off**", the control follows the running mode set by itself.

[Notes]

● When "**Floor debug**" or "**Emergen. Mode**" is activated, then the control will not receive signals from the thermostat.

● If "Thermostat" is set to "**On**", the control will automatically disable some functions concerning timer, and run in accordance with the mode set by the thermostat. In this case, the running mode is unchangeable and the ON/OFF key operation of the control is ineffective.

● When this setting is saved successfully, it will be memorized upon power failure.

● The state of the Thermostat can be changed when the unit is turned off.

2.2.19 IDU Heater

★ Go to the **FUNCTION** page and locate "**IDU Heater**", then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●it will be memorized upon power failure.

2.2.20 Other Heater

★ Go to the **FUNCTION** page and locate **Other heater**, then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●it will be memorized upon power failure.

2.2.21 Underpan Heater

★ Go to the **FUNCTION** page and locate "**Underpan Heater**" then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●it will be memorized upon power failure.

2.2.22 Water Tank

★ Go to the **FUNCTION** page and locate "**Water tank**" then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●it will be memorized upon power failure.

● This setting is allowed only when the unit is turned off.

2.2.23 Tank Sensor

★ Go to the **FUNCTION** page and locate "**Water tank**", then, configure it through the Up/Down key, "**1**" or "**2**". When the water tank is unavailable, this option will be reserved.

[Notes]

●it will be memorized upon power failure.

2.2.24 Solar Heater

★ Go to the **FUNCTION** page and locate "**Solar heater**", then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●it will be memorized upon power failure.

2.2.25 FCU

★ Go to the **FUNCTION** page and locate "**FCU**", then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●It will be memorized upon power failure.

2.2.26 Remote Sensor

★ Go to the **FUNCTION** page and locate "**Remote sensor**", then, configure it through the Up/Down key, "**With**" or "**Without**".

[Notes]

●it will be memorized upon power failure.

● "**T-room ctrl**" can be selected only when the Remote Sensor is set to "**With**".

2.2.27 Air removal

★ Go to the **FUNCTION** page and locate "**Air removal**", then, configure it through the Up/Down key, "**On**" or "**Off**".

[Notes]

●it will not be memorized upon power failure.

● It can be set only when the unit is turned off.

2.2.28 Address

★ Go to the **FUNCTION** page and locate "**Address**", then, configure it through the Up/Down key to set the address.

[Notes]

● It indicates the address of the control and is intended for the group control.

●it will not be memorized upon power failure.

● The address range is [0,125] and [127,253]

● The default address is 0 for the initial use.

2.2.29 Doorguard

★ Go to the **FUNCTION** page and locate "**Doorguard**", then, configure it through the Up/Down

key, “**On**” or “**Off**”.

[Notes]

● When it is activated, the control will check the card is inserted or not. If inserted, the control will run normally; if not, the control will turn off the unit and back to the homepage. In this case, any key operation is ineffective (except for the combined key operation), or a dialogue box will pop up, warning “Keycard uninserted!”.

●it will not be memorized upon power failure.

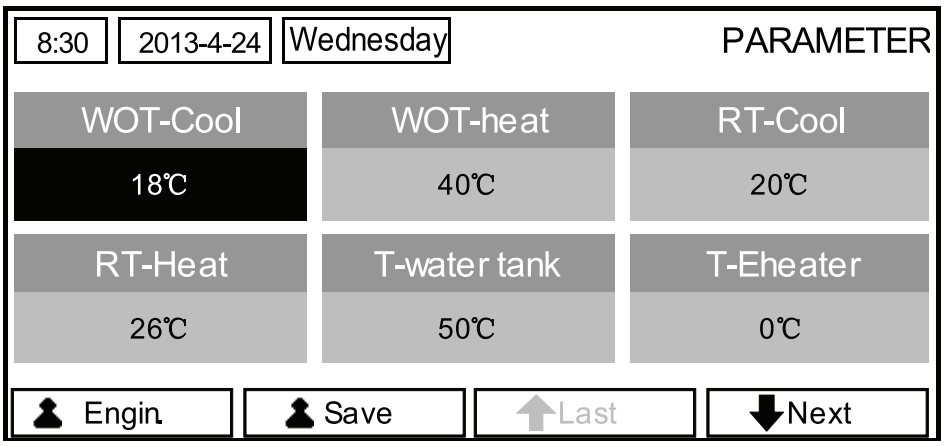
2.3 Parameter Setting (Parameter Set)

2.3.1 User Parameter Setting

★1 At the homepage, it is able to go to the **PARAMETER** page by pressing the Function key no.2.

★2 At the **Parameter Set** page, by the Left/Right key select the desired option and then by the Up/Down key increase or decrease the setting value which will be continuously changed when pressing and holding the key.

★3 When the setting is finished, press “**Save**” and a dialog box will pop up, reminding “**Save settings?**”. If so, press the OK key; if not press the Cancel key to not save this setting.

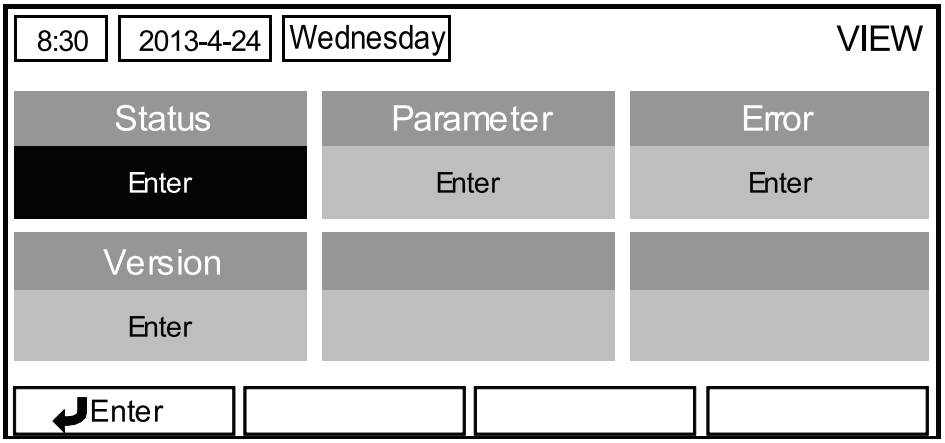


User Setting

No.	Full Name	Displayed Name	Range(℃)	Range(℉)	Default
2	Water out temperature for heating	WOT-Heat	25~55℃ [High temp.] 25~45℃ [Low temp.]	77~131 ℉ [High temp.] 77~113 ℉ [Low temp.]	45℃ /113 ℉ [High temp.] 35℃ /95 ℉ [Low temp.]
4	Room temperature for heating	RT-Heat	18~30℃	64~86 ℉	26℃ /79 ℉
5	Tank temperature	T-water tank	40~80℃	104~176 ℉	50℃ /122 ℉
6	Eheater-on ambient temperature	T-Eheater	-20~18℃	-4~64 ℉	0℃ /32 ℉
7	Extra-heater-on ambient temperature	T-Extraheater	-20~18℃	-4~64 ℉	0℃ /32 ℉
8	Max heat pump waterout temperature (no eheater)	T-HP Max	40~50℃	104~122 ℉	50℃ /122 ℉
9	Lower limit ambient temperature at the auto mode for heating	Lower AT-Heat	-20~5℃	-4~41 ℉	-15℃ /5 ℉
10	Upper limit temperature at the auto mode for heating	Upper AT-Heat	10~20℃	50~68 ℉	15℃ /59 ℉
11	Upper limit room temperature at the auto mode for heating	Upper RT-Heat	22~30℃	72~86 ℉	24℃ /75 ℉
12	Lower limit room temperature at the auto mode for heating	Lower RT-Heat	18~21℃	64~70 ℉	20℃ /68 ℉
13	Upper limit water-out temperature at the auto mode for heating	Upper WT-Heat	46~55℃ [High temp.] 30~35℃ [Low temp.]	115~131 ℉ [High temp.] 86~95 ℉ [Low temp.]	48℃ /118 ℉ [High temp.] 35℃ /95 ℉ [Low temp.]
14	Lower limit water-out temperature at the auto mode for heating	Lower WT-Heat	36~45℃ [High temp.] 25~29℃ [Low temp.]	97~113 ℉ [High temp.] 77~84 ℉ [Low temp.]	40℃ /104 ℉ [High temp.] 29℃ /84 ℉ [Low temp.]
22	Temperature deviation for heatling	ΔT-Heat	2~10℃	36~50 ℉	10℃ /50 ℉
23	Temperature deviation for heating water	ΔT-hot water	2~8℃	36~46 ℉	5℃ /41 ℉

2.4 View

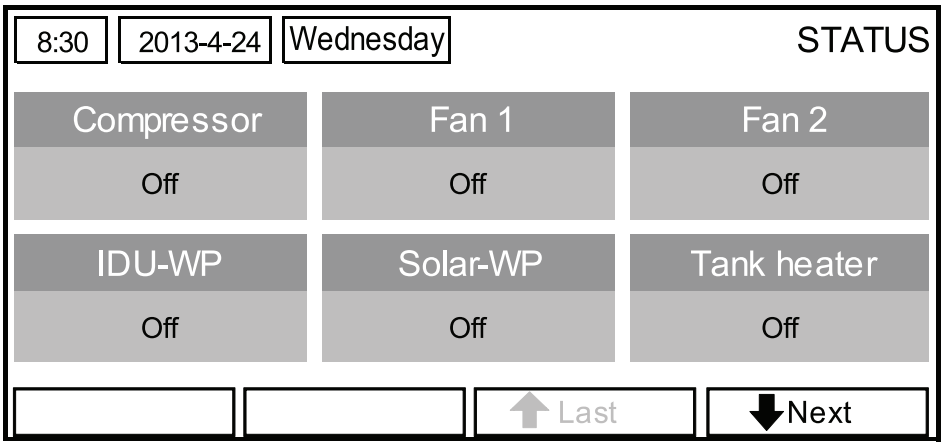
★1 At the homepage, by pressing the Function key no.3 it is able to go to the **VIEW** page as shown in the figure below.



2.4.1 Status View

★1 At the **VIEW** page, select "**Status**" and then press the OK key to go to the **STATUS** page.

★2 At the **STATUS** page, it is able to check the status of each component.



Viewable Components

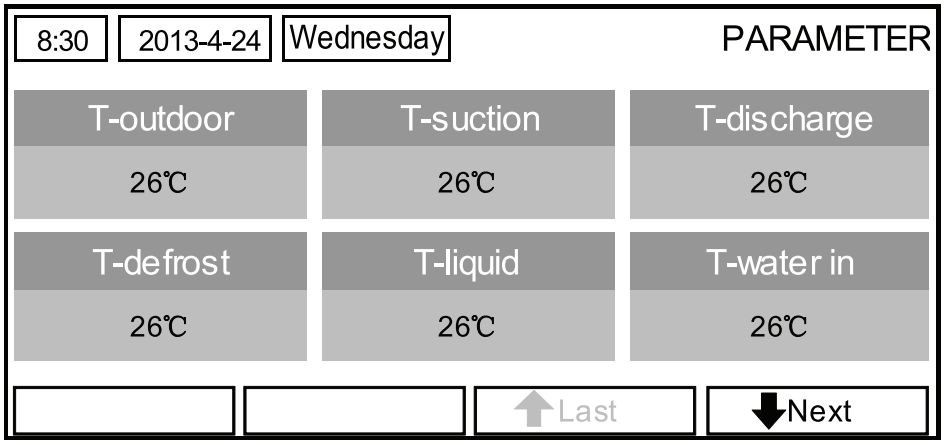
Full Name	Displayed Name	Status
Compressor running state	Compressor	On/Off
Fan 1 running state	Fan 1	On/Off
Fan 2 running state	Fan 2	On/Off
IDU water pump running state	IDU-WP	On/Off
Solar water pump running state	Solar-WP	On/Off
Tank heater running state	Tank heater	On/Off
2-Way valve running state	3-way valve	On/Off
Crankcase heater running state	Crankc.heater	On/Off
Chassis heater running state	Chassis heater	On/Off
Defrost	Defrost	On/Off
Oil return	Oil return	On/Off
Thermostat	Thermostat	On/Off
Assistant heater running state	Assist. heater	On/Off
Water switch running state	Water switch	On/Off

Circulating two-way valve 1 running state	CTW-valve 1	On/Off
Circulating two-way valve 2 running state	CTW-valve 2	On/Off
Doorguard	Doorguard	Card in/Card out
Opration LED	Opration LED	On/Off
Error LED	Error LED	On/Off
3-way valve running state	4-way valve	On/Off
IDU heater 1 running state	IDU heater 1	On/Off
IDU heater 2 running state	IDU heater 2	On/Off
Auto-antifreeze	Auto-antifree.	Enabled/Disabled

2.4.2 Parameter View (Para View)

★1 At the **VIEW** page, select **Parameter** and then press the OK key to go to the **Para View** page.

★2 At the **Para View** page, it is able to view each parameter.

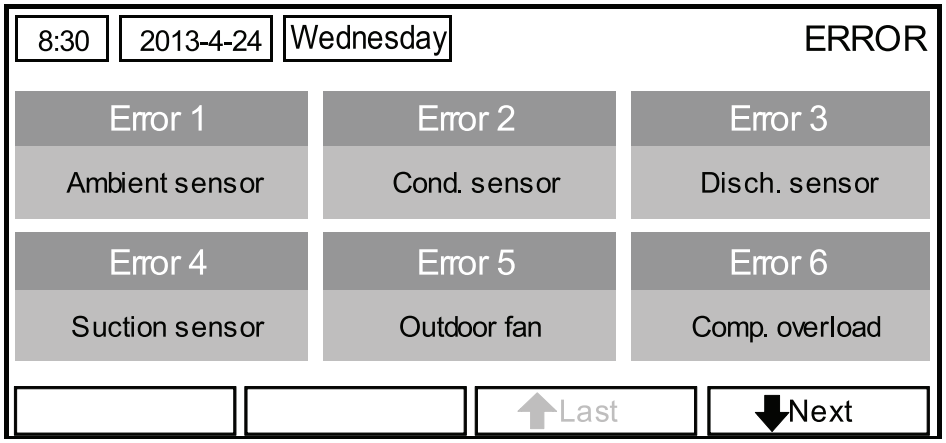


No.	Full Name	Displayed Name	Status
1	Outdoor temperature	T-outdoor	Exact values
2	Suction temperature	T-suction	
3	Discharge temperature	T-discharge	
4	Defrost temperature	T-defrost	
5	Liquid temperature	T-liquid	
6	Water in temperature	T-water in	
7	Plate exchanger water-out temperature	T-waterout PE	
8	E-heater water-out temperature	T-waterout EH	
9	Water tank temperature set point	T-tank ctrl.	
10	Water tank temperature reading	T-tank display	
11	Remote room temperature	T-remote room	
12	Refrigerant-side gas pipe temperature	T-RGP	
13	Solor heater water-out temperature	T-SHW	
14	Target temperature for auto mode	T-auto mode	
15	Target temperature for floor debug	T-floor debug	
16	Time period for floor debug	Debug time	

2.4.3 Error View

★1 At the **VIEW** page, select **Error** and then press the OK key to go to the **ERROR** page.

★2 At the **Error View** page, it is able to view each error.



[Notes]

●The real-time error will show on the control. Taking Error 2 in the above figure for example, when it is recovered, it will disappear and be replaced by Error 3, and other errors follow the same way.

●If the total no. of errors exceed six, other errors should be viewed by switching pages through "**Last**" and "**Next**".

● Any one among "**IDU auxiliary heater 1 error**", "**IDU auxiliary heater 2 error**", "**Water tank heater error**" occurs, the control will beep until this error has been cleared.

● See the following table for error description.

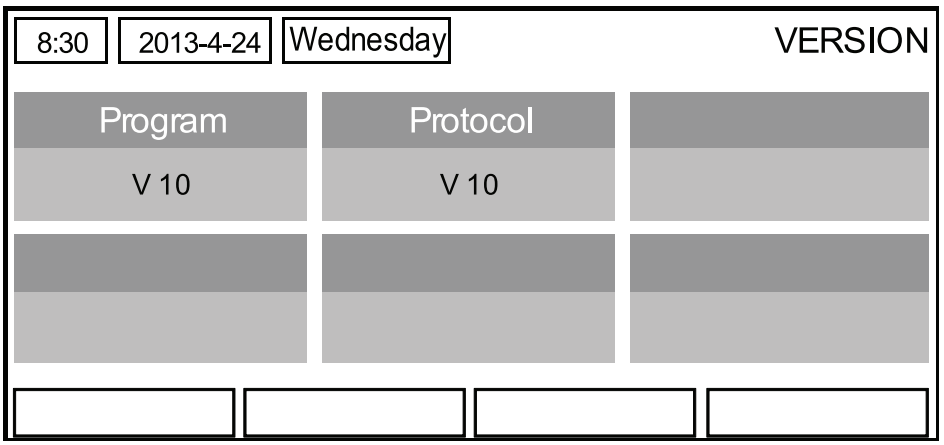
Full Name	Displayed Name	Error Code
Ambient temperature sensor error	Ambient sensor	F4
Condenser temperature sensor error	Cond. sensor	F6
Discharge temperature sensor error	Disch. sensor	F7
Suction temperature sensor error	Suction sensor	F5
Outdoor fan error	Outdoor fan	EF
Compressor internal overload protection	Comp. overload	H3
High pressure protection	High pressure	E1
Low pressure protection	Low pressure	E3
High discharge protection	Hi-discharge	E4
Incorrect capacity DIP switch setting	Capacity DIP	c5
Communication error between indoor and outdoor unit	ODU-IDU Com.	E6
High pressure sensor error	Pressure sens.	FC
Heat exchanger-leaving water temperature sensor error	Temp-HELW	F9
Auxiliary heater-leaving water temperature sensor error	Temp-AHLW	dH
Refrigerant liquid line temperature sensor error	Temp-RLL	F1
Heat exchanger-entering water temperature sensor error	Temp-HEEW	/
Water tank water temperature sensor 1 error	Tank sens. 1	FE
Water tank water temperature sensor 2 error	Tank sens. 2	/
Refrigerant gas line temperature sensor error	Temp-RGL	F3
Solar heater-leaving water temperature sensor error	Temp-SHLW	/
Room temperature sensor error	Sensor-RT	F0

Water flow swich protection	WS-protection	EC
Welding protection of the auxiliary heater 1	Auxi. heater 1	EH
Welding protection of the auxiliary heater 2	Auxi. heater 2	EH
Welding protection of the water tank heater	Auxi. -WTH	EH
Under-voltage DC bus or voltage drop error	DC under-vol.	PL
Over-voltage DC bus	DC over-vol.	PH
AC current protection (input side)	AC curr. pro.	PA
IPM defective	IPM defective	H5
PFC defective	FPC defective	HC
Start failure	Start failure	LC
Phase loss	Phase loss	LD
Drive module resetting	Driver reset	P0
Compressor over-current	Com. over-curr.	P5
Overspeed	Overspeed	LF
Sensing circuit error or current sensor error	Current sen.	PC
desynchronizing	Desynchronize	H7
Compressor stalling	Comp. stalling	LE
Communication error	drive-main com.	P6
Radiator or IPM or PFC module overtemperature	Overtemp.-mod.	P8
Radiator or IPM or PFC module temperature sensor error	T-mod. sensor	P7
Charging circuit error	Charge circuit	PU
Incorrect AC voltage input	AC voltage	PP
Drive board temperature sensor error	Temp-driver	PF
AC contactor protection or input zero crossing error	AC contactor	P9
Temperature drift protection	Temp. drift	PE
Current sensor connection protection (current sensor not connected to phase U/V)	Sensor con.	PD
Communication error to the outdoor unit	ODU Com.	E6
Communication error to the indoor unit	IDU Com.	E6
Communication error to the drive	Driver Com.	E6

2.4.4 Version View (VERSION)

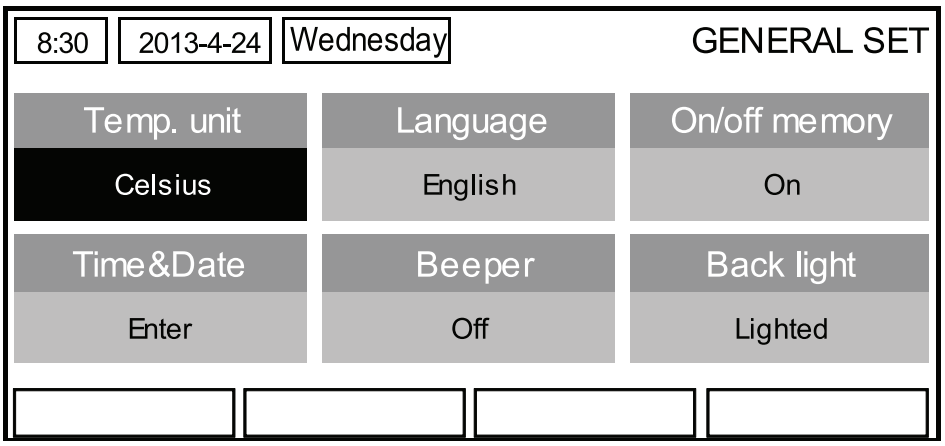
★1.At the **VIEW** page, select **Version** and then press the OK key to go to the **VERSION** page.

★1 At the **VERSION** page, the program and protocol versions are listed.



2.5 General Set

★1. At the homepage, by pressing "**GEN**." access to the GENERAL SET page. At this page, it is able to set "**Temp. unit**", "**Language**", "**On/off memory**", "**Time & Date**", "**Beeper**" and "**Back light**", as shown in the figure below.

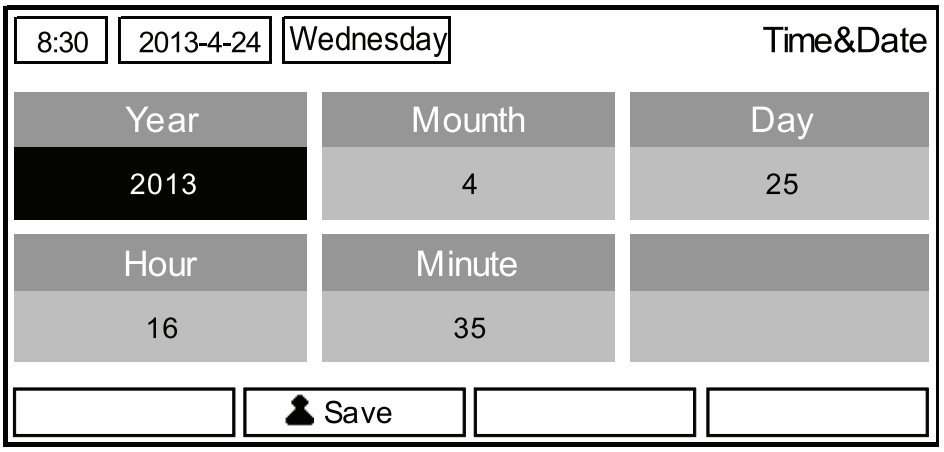


No.	Full Name	Displayed Name	Range	Default	Remarks
1	Temperature unit	Temp. unit	Celsius/ Fahrenheit	Celsius	/
2	Language	Language	中文 /English	English	/
3	On/off memory	On/off memory	On/Off	On	/
4	Time&Date	Time&Date	/	/	/
5	Beeper	Beeper	On/Off	On	/
6	Back light	Back light	Lighted/Energy save	Energy save	"On": it always lights on. "Eco": it lights off when there is no key operation for 1 minute, and will lights on where there is any key operation.

2.5.1 Clock Setting

★1 At the homepage, by pressing "**GEN.**" access to the **GENERAL SET** page. Then, select "**Time & Date**" at this page. After that, go to the "**Time & Date**" setting page by pressing the OK key.

★ Change the set value by pressing the Up/Down key. Then by pressing "**Save**", a pop-up window will pop up to remind if you are determined to save this setting. If so, press the OK key. If not, press the Cancel key to not save this setting. The saving setting will update at the upper left corner of the control.

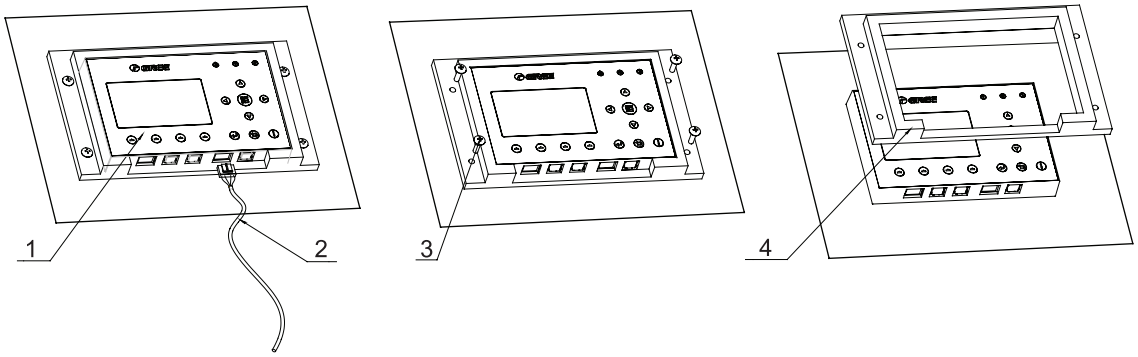


2.6 Key Lock

★ At the homepage, by pressing the Up/Down keys simultaneously for 5 seconds, it is able to activate or deactivate this function. When it is activated, any key operation is ineffective.

3. Precautions

Install the control following instruction shown in the figure below.



No.	1	2	3	4
Name	LCD	Communication line	Screws ST4.2X16	Rubber pad

Installation Steps

Step 1: draw the communication lines out from the LCD

Step 2: take four screws away from the rubber pad.

Step 3: remove the rubber pad off the LCD.

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